

ABSTRACT

A method of depolymerizing galactomannan-type polysaccharide polymers and xanthan, preferably galactomannans, to a pre-selected lower molecular weight by irradiation with high energy electron beams. The preferred galactomannans for treatment according to this method are guar gum, guar splits and hydroxypropyl guar. In a preferred embodiment the guar gum is depolymerized preferably to a molecular weight of about 150,000 Daltons to about 200,000 Daltons. The depolymerized guar has a polydispersity of less than about 3.0 and is useful in oil well fracturing to enhance oil production.